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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
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09/574,519 05/18/00 HENDERSON

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EXAMINER

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FREIDMAN, J

ART UNIT PAPER NUMBER

1655

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DATE MAILED:

01/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

## Office Action Summary

|                               |                                 |
|-------------------------------|---------------------------------|
| Application No.<br>09/574,519 | Applicant(s)<br>Henderson et al |
| Examiner<br>Jeffrey Fredman   | Group Art Unit<br>1655          |

Responsive to communication(s) filed on Oct 23, 2000

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

### Disposition of Claims

Claim(s) 1-66 is/are pending in the application.

Of the above, claim(s) 1-55 is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 56-66 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Election/Restriction*

1. Applicant's election with traverse of Group III in Paper No. 3 is acknowledged. The traversal is on the ground(s) that the product cannot be made by alternative processes. This is not found persuasive because Chrisey et al (Nucleic Acids Research (1996) 24(15):3040-3047), for example, teach photolithographic synthesis of arrays with features dimensions to 1 micron by photolithography of nucleic acid molecules.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 56-65 are rejected under 35 U.S.C. 102(e) as being anticipated by Peeters (U.S. Patent 6,123,819).

Peeters teaches a molecular array comprising a) a surface (figure 2A and column 6) and b) at least one molecular deposition domain deposited on said surface wherein the spatial address of the domain is less than one micron in area (figure 2A and columns 5 and 6). In figure 2A, Peeters expressly shows a protein deposited onto a surface where the domain of deposition onto

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electrodes 26b and 26c are separated by 1 nanometer and where the electrodes range in size from 2 angstroms to 5 nanometers, which are two orders of magnitude smaller than a micron. Peeters expressly teaches that the domain is at a known location and can be high density (column 6, lines 36-42), that the array can be formed of Gold (column 5, lines 23-26) and can bind proteins or DNA (column 3, lines 49-51 and figure 2A) and that the array is composed of materials which are inherently either hydrophobic or hydrophilic, such as thiol groups, or gold or zinc oxide (column 5). Peeters, in figure 2A, shows deposition domains which comprise spots, irregular shapes and in figure 4, regular shapes which form a line.

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al (Science (1996) 271:795-799) teaches a surface which comprises a DNA molecule attached to a domain which represents a single molecule. This reference is cumulative to Peeters, but would also serve as the basis of a rejection since the single DNA molecules attachment site is smaller than a micron.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Fredman, Ph.D. whose telephone number is (703) 308-6568.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

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Papers related to this application may be submitted to Group 1600 by facsimile transmission via the P.T.O. Fax Center located in Crystal Mall 1. The CM1 Fax Center numbers for Group 1600 are either (703) 305-3014 or (703) 308-4242. Please note that the faxing of such papers must conform with the Notice to Comply published in the Official Gazette, 1096 OG 30 (November 15, 1989).



**Jeffrey Fredman  
Primary Patent Examiner  
Art Unit 1655**

December 28, 2000